

Reading Assignment 5:

Eudoxus' Theory of Proportions and Number Theory

Required Readings:

- Book V of Euclid. *The Thirteen Books of Euclid's Elements: Books III-IX*, volume 2. Cambridge University Press, 1908b
 - Please read the definitions (pages 113-114) and proofs of propositions 1, 4, and 13. Ignore the commentary.
- Book VII of Euclid. *The Thirteen Books of Euclid's Elements: Books III-IX*, volume 2. Cambridge University Press, 1908b
 - Please read the definitions (pages 277-279) and proofs of propositions 1 and 2. Ignore the commentary.
- Book X of Euclid. *The Thirteen Books of Euclid's Elements: Books X-XIII*, volume 3. Cambridge University Press, 1908a
 - Please read the commentary on pages 1-3, and the definitions on page 10.

Questions:

- State in your words what the first proposition of Book V asserts.
- What is a number according to Euclid?
- What was the Pythagorean discovery of incommensurability of the diagonal?

References

- Euclid. *The Thirteen Books of Euclid's Elements: Books X-XIII*, volume 3. Cambridge University Press, 1908a.
- Euclid. *The Thirteen Books of Euclid's Elements: Books III-IX*, volume 2. Cambridge University Press, 1908b.